

REMARKS

Claims 23-36 and 41-63 are currently pending in this application. Claims 37-40 are cancelled by this amendment.

Claims 25 and 27 were rejected under 35 USC 112, second paragraph. The Examiner is referred to paragraph [0068] of the specification, which provides support for the feature recited in claim 25. The Examiner is referred to paragraph [0065] of the specification, which provides support for the feature recited in claim 27.

Claims 23-24 and 28-34 stand rejected under 35 U.S.C. 103(a) as being unpatentable over USP 4,185,167 to Cunningham and USP 5,406,634 to Anderson. Claims 35 and 37-42 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham and Anderson in view of US Application 2003/0107478 to Hendricks.

Claims 37-40 have been cancelled without prejudice or disclaimer to the subject matter contained therein. New apparatus claims 44-51, 57-61, 62-63 and new method claims 52-56 have been added to better define embodiments of the present invention.

The Examiner's comments have been carefully considered, however, Applicants respectfully traverse the art grounds of rejection.

The Examiner contends that Cunningham teaches a communication network and a plurality of sound masking units, each having a sound masking signal generator, "communicatively connected" to one another via the communication network. The Examiner relies on Fig. 5 and column 6, line 26-

37 for the teachings of a communication network and the connection of the sound masking units in the network. The Examiner acknowledges that Cunningham does not teach a sound masking signal generator configured to generate and output a sound masking signal based on a control signal carried over a control signal channel of the communication network. The Examiner also acknowledges that Cunningham does not teach a control unit configured to selectively output at least one sound masking signal on the plurality of output signal channels of the communication network, and the control unit configured to generate the control signal and output the control signal on the control signal channel of a communication network.

The Examiner relies on Anderson as teaching an intelligent speaker unit for a speaker system network comprising a plurality of speaker units and a control unit configured to generate the control signals to selectively control operation of the plurality of speaker units and configured to send the control signals over the communication network in order to allow an operator to remotely control the plurality of speaker units. The Examiner maintains the intelligent speaker unit according to Anderson is the same as a sound masking unit.

The Examiner contends that Anderson teaches the deficiencies of Cunningham with respect to the claimed invention, and that therefore one skilled in the art would have applied these teachings to Cunningham. It is respectfully submitted that Anderson does not teach the deficiencies of Cunningham, and therefore there is no motivation for one skilled in the art to

combine the references. Secondly, even if one skilled in the art were to combine the teachings of Anderson and Cunningham the resulting system is not the same as that defined by claims 23-63.

Anderson teaches a paging/music system including intelligent speaker units 22 connected in a network with a control architecture (computer 10 and board 11) as shown in Figs. 1 and 2. The system according to Anderson does NOT include a sound masking generator component and therefore there is no mechanism for generating a sound masking signal. The intelligent speaker units 22 as disclosed and taught by Anderson are limited to receiving and outputting paging/music signals. In addition, Anderson provides NO teaching or suggestion of networking and centrally controlling sound masking units.

As previously stated, paging/music systems and sounds masking systems are fundamentally different systems directed to solve fundamentally different problems. Paging/music systems are concerned with delivering intelligible sounds throughout a workspace. Sound masking systems, on the other hand, are concerned with suppressing, i.e. masking, unwanted sounds or ambient sounds in a physical space such as an office or workplace. Sound masking systems generate incoherent or unintelligible background sounds that serve to mask the unwanted intelligible sounds in the workplace. Because ambient sounds can vary from location to location in a workplace, the space may be divided into one or more zones, with each zone having a sound masking signal with a different masking level and/or frequency level, wherein the

masking level or frequency level is tailored to the ambient sounds sought to be masked or suppressed.

The Examiner is referred to Cunningham, at column 1, lines 14 to 23, which states as follows:

Such proposals have included ... the use of piped-in or canned music in an attempt to condition the environment to reject the unwanted sounds in the area occupied by the listener. However, music itself played continuously may become distracting to the listener or listeners over an extended period of time, particularly if the music is of a type which the listener may not find pleasing.

Cunningham clearly distinguishes between intelligible sounds, such as music, and unintelligible or incoherent sounds for masking unwanted sounds. Cunningham further emphasizes that intelligible sounds, such as music, are not suitable for sound masking and can disturb occupants over time. These teachings are entirely consistent with the state of the art as taught by Orfield (US Patent No. 4,319,088), which was cited in the prior Office action.

Furthermore, Cunningham provides no suggestion of networking and controlling sound masking units even though Cunningham was clearly aware of paging systems. As taught by Cunningham in column 3, lines 15-27 and shown in Fig. 2, the circuit 16 in the sound masking package M includes a pair of conductors 29 connected to a pair of external terminals 28. The external terminals 28 are connected by means of a pair of conductors 27 to a remote signal source such as "a musical transcription, a paging system or an

emergency call system". Thus, Cunningham teaches away from a combination/modification as suggested by the Examiner.

In view of the fundamental differences between intelligible sounds, such as music and paging as taught by Anderson, and the unintelligible sounds for sound masking as clearly taught by Cunningham and also Orfield, there is no motivation or suggestion for one skilled to modify and combine Anderson with Cunningham.

It is further submitted that even if one skilled in art were to combine the teachings of Anderson and Cunningham (notwithstanding the lack of any motivation or suggestion in the art), the resulting system would not be the same as that recited by independent claims 23, 44, 52, 57 and 62.

With all due respect, Cunningham does not teach or disclose the arrangement as defined by independent claims 23, 44, 52, 57 or 62 of a communication network and a plurality of sounds masking units "communicatively connected" to a communication network as alleged by the Examiner at pages 2-3 of the Office Action. The Examiner relies on Fig. 5 and column 6, lines 26 to 37:

Wherein the masking packages is to be used in the area substantially larger than the typical office enclosure, a plurality of masking packages M may be connected together for simultaneous operation, such an arrangement for a plurality of masking packages being shown in Fig. 5. Adequate sound masking coverage is obtained when the masking packages M are spaced apart within the range of between 16 to 20 feet, the masking packages being interconnected by suitable conductors 111 and supplied with power through a junction box 112 suitably connected to a source of electric power by conductors 113.

Based on a careful reading of the passage relied on by the Examiner and the rest of the reference, there is no teaching or suggestion that the sound masking packages M have “a communication interface” and that the conductors 111 referred to in Fig. 5 comprise a communication channel for transmitting or receiving a masking volume signal or a masking frequency signal as recited in the independent claims of the subject application. As taught by Cunningham, the conductors 111 interconnecting the plurality of sound masking packages M merely provide power. This limited functionality of the conductors 111 is further evidenced by Fig. 2 and the circuit schematic of Fig. 3. As shown in Fig. 2, terminal pairs 34 are connected to respective conductors 33, which as shown in Fig. 3, provide a supply voltage input to a bridge circuit 43 in the DC power supply circuit for the sound masking package M. As such the conductors 111 merely provide a supply voltage. With all due respect, it is submitted that a conductor carrying a supply voltage is not a communication network. It is further noted that Cunningham does not teach or even suggest receiving a sound masking signal, a masking volume signal or a masking frequency signal over the conductor 111, and moreover the circuit shown in Fig. 3 is not capable of controlling the volume and/or frequency of the sound masking signal in response to any control signals. It is further submitted that these deficiencies in Cunningham also make it impossible to implement the zoning functions according to other embodiments of the present invention as recited in the claims.

Anderson does not remedy these deficiencies. The intelligent speaker unit 22 as disclosed and taught by Anderson is limited to receiving and outputting paging/music signals. Anderson does not teach or suggest generating or outputting a sound masking signal, or a masking volume signal or a masking frequency signal for controlling the sound masking signal. Accordingly, if one skilled in the art were to combine Anderson and Cunningham as suggested by the Examiner, the resulting system would still not include the capability to generate or output a sound masking signal, a sound masking volume signal and a sound masking frequency signal which are transmitted over a network to control the volume and/or frequency of a sound masking signal.

Hendricks also does not remedy these deficiencies. Hendricks discloses and teaches a sound masking signal which is generated locally. As shown in Fig. 5 and described at paragraph [048], Hendricks discloses and teaches a masking sound generator 404 which is local, i.e. contained in the electronics module 401. This is clearly not the same as the claimed limitation of a "control unit configured to selectively output at least one sound masking signal on the plurality of output channels of the communication network". According to Hendricks, the masking sound generator 404 stores digital masking sound data files which are played back to produce a sound masking signal. Again, this is not the same as a sound masking signal generated at a central location, e.g. the control unit, and transmitted to the sound masking units over a communication network.

It is further submitted that if one skilled in the art were to combine Hendricks with Cunningham and Anderson as suggested by the Examiner to provide centralized control, this would defeat one of the key features of the Hendricks system. It is a well-established tenet of patent law that where a suggested combination/modification of a reference leads to the destruction of a teaching in the reference, the suggested combination/modification would NOT have been obvious to one skilled in the art. Hendricks clearly teaches away from the combination/modification as suggested by the Examiner.

Furthermore, even if Hendricks was combined with Cunningham and Anderson, the resulting combination would fail to disclose or suggest the capability to individually control the frequency and/or the volume of the sound masking signal. As shown in Fig. 5, Hendricks teaches mixing the sound masking signal (obtained from the local masking sound generator 404) with audio mixer 407, and the audio mixer 407 is followed by a 1/3 Octave Equalizer 408 and an Audio Pre-amplifier 409. A control signal B from the system controller 403 provides a control input to the 1/3 Octave Equalizer 408 and a control signal A provides a control input for the Audio Pre-Amplifier 409. Accordingly, Hendricks does satisfy the feature/limitation of independent volume and frequency control of the sound masking signal and the paging signal.

Since Cunningham, Anderson and Hendricks, whether taken alone or in combination, do not disclose or teach all of the limitations as recited in independent claims 23, 44, 57, 62 or 53, it is submitted that the invention as

recited is not obvious. Since the remaining claims depend either directly or indirectly from the associated independent claim, it is submitted that the dependent claims are also not obvious for similar reasons.

CONCLUSION

In view of above remarks, reconsideration of the outstanding rejection and allowance of the pending claims is respectfully requested.

If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at number listed below.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) hereby petition(s) for a three (3) month extension of time for filing a reply to the outstanding Office Action and submit the required \$1020.00 extension fee herewith.

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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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By

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